ELEC74 Project

This project serves two purposes. Foremost as an evaluation tool to your ability to synthesize the subject matter presented in this class and secondly to have fun with electronics.

Objective:

https://hackaday.io/prize

In normal times, by now hackaday would have announced the hackaday prize. This year they have not. Based on previous years and anticipation that this year will be similar. The objective is to build something that makes the world a better place.

Evaluation Criteria:

Utilize at least three concepts learned in different labs to create circuit that was not part of the laboratory material of the class. Concepts can include but are not limited to the following:

Digital Output, Digital Input, Serial Communications, Analog Input, Analog Output.

You may utilize other circuitry from outside the class or not. You may try to create a circuit that you saw in a YouTube video presented in class or something altogether unique.

Scoring

This assignment is worth 5% of the class grade. You do not need to purchase any material outside the lab kit required for the class to complete the project.

Documentation of the project will amount for the 50% of the project grade

Project Proposal (10%)

1. Discuss the challenge the project addresses
2. Discuss how the project will alleviate or solve the problem that the project addresses
3. Discuss how the project might be world changing
4. Publish at least one (1) image illustrating how the project might be used. This may be a sketch, schematic, flow chart, rendering, or other type of image.
5. Link to any repositories (e.g., Github / hackaday.io) **This is optional for ELEC74**
6. Document all open-source licenses and permissions as well as any applicable third-party licenses/restrictions. chipKIT->GPL License with some BSD License
7. Submit the Project to 2020 Hackaday Prize using the "Submit project to..." option found on the published Project Profile. **This is optional for ELEC74**

Remember, if you're trying to sell your idea to an investor, your boss or your growing fan base on YouTUBE, your description should be concise. This project description can be used as a voice over for a video of the completed project. The video is required and I would love if everyone posted videos on YouTUBE. Posting on-line is **not** required. If you create a hackaday.io page to document your project you can enter it into the Hackaday Prize for 2020.

Construction (20%)

This document will show a schematic of what you built and other relevant notes on how to build your project should someone else need to duplicate your work.

User's Manual (20%)

This document will describe to a use of your project how to interact with the project. Manual should be written so that someone can successfully use your project without your help. Hint: Pictures are very helpful.

Prototype (50%)

For each of the three concepts demonstrated you will receive up to 50/4% credit.

For documented source code receive up to 50/4% credit.

Failure is Acceptable

To fail gracefully (and get full credit for the project) you must complete all documentation and have attempted to build your project. If your project doesn't work, in your video presentation please explain to the best of your understanding as to why your project doesn't work and how you might approach your next attempt to achieve success.